

CLAIMS

Having thus described the invention, what is claimed and desired to be secured by Letters Patent is:

7. An improved flow sensor having a housing and a tube inserted there within for measuring a medium flowing through the tube, the housing having an upper and lower shell surrounding the tube and measuring electronics enclosed within the housing in communication with the tube, the tube having a flow bore formed therein through which the medium flows, the housing further including recesses formed in opposed side faces of the upper and lower shells for receiving a pair of unions located at opposed ends of the tube for maintaining the tube within the housing, the improved flow sensor comprising:

- a) each union having an outer part, an inner part and a central piece located intermediate the union outer and inner parts,
- b) a blind hole formed in each union inner part concentric to the flow bore for receiving the tube opposed ends, and
- c) a pair of opposed portions of the upper and lower shells for receiving the union central pieces disposed proximal to the tube opposed ends,

8. The improved flow sensor of Claim 7, further comprising:

- a) a first groove formed along an inner circumference of each union inner part perpendicular to the tube, and

b) a first o-ring inserted within each first groove for sealing each union inner part against each respective tube opposed end.

9. The improved flow sensor of Claim 7, wherein the pair of opposed portions of the upper and lower shells are semi-cylindrical in shape and each union central piece is cylindrically shaped having a diameter less than that of each union outer and inner part.

10. The improved flow sensor of Claim 7, further comprising:

a) a second groove formed in each opposed portion of the upper and lower shells surrounding the union central pieces perpendicular to the tube, and

b) a second o-ring inserted within each second groove for sealing each union central piece against each respective opposed portion of the upper and lower shells.

11. The improved flow sensor of Claim 7, further comprising a ring surrounding each union inner part.

12. The improved flow sensor of Claim 11, wherein each union inner part is constructed from plastic material and each ring is constructed of metal, each metal ring acting as a shape-stabilizer for each plastic union inner part.

13. The improved flow sensor of Claim 7, further comprising a pin inserted through one of the union inner parts for engaging the housing and for preventing any turning of the unions and

the tube.

14. The improved flow sensor of Claim 13, wherein the pin inserts through the union inner part and engages a bore formed in the housing lower shell.

15. The improved flow sensor of Claim 13, wherein the pin inserts through the union inner part and engages a bore formed in the housing upper shell.